

WHAT IS CLAIMED IS:

1. An electronic apparatus which can operate by electric power supplied from a cell unit that can produce electricity by chemical reaction, comprising:

5           a switching unit which can switch an operation mode between a first operation mode that makes an operation with a first power consumption amount, and a second operation mode that makes an operation with a second power consumption amount lower than the first  
10 power consumption amount;

          a notification unit configured to send a signal indicating that the operation mode is switched to the cell unit; and

          a control unit configured to switch the operation  
15 mode on the basis of a signal sent back from the cell unit in response to the signal of the notification unit.

2. The electronic apparatus according to claim 1, wherein the notification unit notifies of switching of  
20 the operation mode to the cell unit, upon switching from the second operation mode to the first operation mode.

3. The electronic apparatus according to claim 2, wherein the control unit aborts switching to the first  
25 operation mode, when a received signal indicates that a power supply amount from the cell unit is short upon switching to the first operation mode.

4. An electronic apparatus system which comprises an electronic apparatus which can operate by electric power supplied from a cell unit that can produce electricity by chemical reaction,

5 the electronic apparatus comprising:

a switching unit which can switch an operation mode between a first operation mode that makes an operation with a first power consumption amount, and a second operation mode that makes an operation with a second power consumption amount lower than the first power consumption amount; and

a notification unit configured to send a signal indicating that the operation mode is switched to the cell unit,

15 the cell unit comprising:

a response unit which is responsive to the signal from the notification unit to send back information based on the signal to the electronic apparatus, and

the electronic apparatus further comprising:

20 a control unit configured to switch the operation mode on the basis of the information received from the cell unit.

5. An electronic apparatus system which includes a cell unit comprising a fuel cell that can produce electricity by chemical reaction, and an electronic apparatus which can operate by electric power supplied from the cell unit,

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the electronic apparatus comprising:

a switching unit which can switch an operation mode between a first operation mode that makes an operation with a first power consumption amount, and a second operation mode that makes an operation with a second power consumption amount lower than the first power consumption amount;

a notification unit configured to send a signal indicating that the operation mode is switched to the cell unit; and

a control unit configured to switch the operation mode on the basis of a signal sent back from the cell unit in response to the signal of the notification unit, and

the cell unit comprising:

a reception unit configured to receive the signal from the notification unit;

a comparison unit configured to compare a power consumption amount upon operating the electronic apparatus in the operation mode after switching with output electric power that can be output from the cell unit on the basis of the signal received by the reception means; and

a response unit configured to send a signal based on a comparison result of the comparison unit to the electronic apparatus.

6. The electronic apparatus system according to

claim 5, wherein the response unit sends a signal that permits switching of the operation mode to the electronic apparatus, when the comparison result of the comparison unit indicates that the output electric power of the fuel cell is larger than the power consumption amount.

7. The electronic apparatus system according to claim 6, wherein the cell unit further comprises a power control unit configured to control the fuel cell to lower the output electric power, when the comparison result of the comparison unit indicates that the output electric power of the fuel cell is larger than the power consumption amount by a value beyond a predetermined value.

8. The electronic apparatus system according to claim 5, wherein the cell unit further comprises a power control unit configured to control the fuel cell to raise the output electric power, when the comparison result of the comparison unit indicates that the power consumption amount is larger than the output electric power of the fuel cell, and

the response unit sends a signal indicating that the output electric power of the fuel cell has been changed to the electronic apparatus, when the output electric power of the fuel cell has reached the power consumption amount under the control of the power control unit.

9. The electronic apparatus system according to claim 5, wherein the response unit sends a signal that inhibits switching of the operation mode, when the comparison result of the comparison unit indicates that the power consumption amount is larger than rated electric power guaranteed by the fuel cell.

10. The electronic apparatus system according to claim 5, wherein the cell unit further comprises:  
a rechargeable secondary battery; and  
a power control unit configured to control the fuel cell to raise the output electric power to the rated electric power, and to control the secondary battery to compensate for a difference between the power consumption amount and rated electric power, when the comparison result of the comparison unit indicates that the power consumption amount is larger than rated electric power guaranteed by the fuel cell.

11. The electronic apparatus system according to claim 5, wherein the cell unit further comprises:  
a rechargeable secondary battery; and  
a power control unit configured to charge the secondary battery by electric power as a difference between the output electric power of the fuel cell and the power consumption amount, when the comparison result of the comparison unit indicates that the output electric power of the fuel cell is larger than the power consumption amount by a value beyond a

predetermined value.

12. An operation mode switching method for an electronic apparatus system which includes a cell unit that can produce electricity by chemical reaction, and  
5 an electronic apparatus which has a switching unit which can switch an operation mode between a first operation mode that makes an operation with a first power consumption amount, and a second operation mode that makes an operation with a second power consumption  
10 amount lower than the first power consumption amount, and can operate by electric power supplied from the cell unit, comprising:

sending a signal indicating the operation mode is switched to the cell unit, by the electronic apparatus;

15 comparing a power consumption amount upon operating the electronic apparatus in the operation mode after switching with output electric power that can be output from the cell unit on the basis of the signal from the electronic apparatus, and sending a  
20 signal based on the comparison result to the electronic apparatus, by the cell unit; and

switching the operation mode on the basis of the signal sent back from the cell unit, by the electronic apparatus.